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de Zwaan C, Bär FW, Janssen JHA, Cheriex EC, Dassen WRM,
Brugada P, Penn OCKM, Wellens HJJ. Angiographic and clin-

Brugada P, Penn OCKM, Wellens HJJ. Angiographic and clinical characteristics of patients with unstable angina showing an ECG pattern indicating critical narrowing of the proximal LAD coronary artery. 1989;117:657-65 (Curriculum cardiol.) Dhalla NS (see Ganguly et al). 1989;117:1399-400 (Letter) DiCarlo LA Jr (see Baerman et al). 1989;117:308-11 Dicterich H-A (see Mitrovic et al). 1989;117:108-11 Dicertori M (see Chargei) and 1989;117:108-11 Disertori M (see Guarnerio et al). 1989;117:1241-52 DiSesa VJ (see Mok et al). 1989;117:1171-3 (Brief comm.) Doğar H (see Özder et al). 1989;117:1407-8 (Letter) Dohi T (see Mori and Dohi). 1989;117:1167-9 (Brief comm.)

Dohi T (see Mori and Dohi). 1989;117:1167-9 (Brief comm.)
Donohue DJ (see Shawl et al). 1989;117:537-42
Dorosti K (see Tuzcu et al). 1989;117:537-42
Dorosti K (see Tuzcu et al). 1989;117:1374-7 (Prog. cardiol.)
Douglas JS Jr (see Ellis et al). 1989;117:777-82
Downes TR, Nomeir A-M, Hackshaw BT, Kellam LJ, Watts LE,
Little WC. Diastolic mitral regurgitation in acute but not
chronic aortic regurgitation: implications regarding the mechanism of mitral closure. 1989;117:1106-12
Dubois-Randé J-C (see Geschwind et al). 1989;117:1147-52 (Prog.

cardiol )

cardiol.)
Dubuc M, Kus T, Campa MA, Lambert C, Rosengarten M, Shenasa M. Electrophysiologic effects of intravenous propafenone in Wolff-Parkinson-White syndrome. 1989;117:370-6
Dulaney JJ, Arvan S. Valvular prolapse and great vessel dilatation in multiple endocrine neoplasia type 2B. 1989;117:198-201

(Brief comm.)

Dunham WR (see Kavanaugh et al). 1989;117:53-9 Duo GS, Hoff P, Kupersmith J. Repolarization interactions

between cardiac segments of varying action potential duration. 1989;117:854-61

Eagle KA (see Kaye et al). 1989;117:1169-71 (Brief comm.)
Eaker ED, Kronmal R, Kennedy JW, Davis K. Comparison of the long-term, postsurgical survival of women and men in the Coronary Artery Surgery Study (CASS). 1989;117:71-81
Earnhardt W (see McFarland et al). 1989;117:1209-14
Ebihara H (see Matsuda et al). 1989;117:1014-7
Edner M (see Jogestrand et al). 1989;117:1076-83
Eichhorn EJ, Konstam MA, Salem DN, Isner JM, Deckelbaum L, Stransky NB, Metherall JA, Toltzis HI. Dipyridamole thallium-201 imaging pre- and post-coronary angioplasty for assessment of regional myocardial ischemia in humans. 1989;117:1203-9
Eisen HJ (see Geltman et al). 1989;117:1406 (Letter reply)
El Gamal M (see Ciampricotti and El Gamal). 1989;117:188-91 (Brief comm.)

(Brief comm.)
El Habbal MH, Suliman RF. The aortic root in subaortic stenosis. 1989;117:1127-32

1999;117:1127-32 Elkayam U (see Iosa et al). 1989;117:882-7 — (see Jamison et al). 1989;117:607-14 Elliott HL (see Reid et al). 1989;117:751-5 (Symposium) Ellis SG, Roubin GS, Wilentz J, Douglas JS Jr, King SB III. Effect of 18-to 24-hour heparin administration for prevention of restenosis after uncomplicated coronary angioplasty. 1989;117:777-82

Enyama H (see Matsui et al). 1989;117:472-4 (Brief comm.)
Estep CB (see Luther et al). 1989;117:842-7
Estes NAM III, Manolis AS, Greenblatt DJ, Garan H, Ruskin JN.

Therapeutic serum lidocaine and metabolite concentrations in patients undergoing electrophysiologic study after discontinuation of intravenous lidocaine infusion. 1989;117:1060-4

Fabbiocchi F (see Loaldi et al). 1989;117:315-22
Fabris B (see Carretta et al). 1989;117:229-35 (Symposium)
Facchini M, Varisco T, Bonazzi O, Priori SG, Songa V, Schwartz
PJ. Efficacy and safety of flecainide in low-risk patients with
chronic ventricular arrhythmias: a two-year follow-up.
1989;117:1258-64
Fair FS, Sweener MB, France MB, Larrend M, Chronic VIII.

Fain ES, Sweeney MB, Franz MR. Improved internal defibrilla-tion efficacy with a biphasic waveform. 1989;117:358-64 Falk E (see Andersen et al). 1989;117:391-5 Fallon JT (see Rezkalla et al). 1989;117:391-5

Farber JP (see Vanoli et al). 1989;117:348-57 Farber N (see Al-Wathiqui et al). 1989;117:791-8 Fechner N (see Kavanaugh et al). 1989;117:53-6 Fechner KP (see Kavanaugh et al). 1989;117:53-7 (Brief comm.) Ferguson JJ III, Bush HS, Riuli EP. Doppler echocardiographic assessment of the effect of balloon acrtic valvuloplasty on left

wentricular systolic function. 1989;117:18-24

—, Manning WJ, Come PC. Pulsed Doppler echocardiographic determination of the time course of left ventricular filling: validation with cineangiography. 1989;117:127-32

Finet G (see André-Fouet et al). 1989;117:892-902 (Curriculum

Finet G (see Andre-Fodet et al.). 1989;117:1214-22
Firmin DN (see Bogren et al.). 1989;117:1214-22
Fischetti F (see Carretta et al.). 1989;117:229-35 (Symposium)
Flachskampf FA (see Lambertz et al.). 1989;117:615-22 Flamm ES. The potential use of nicardipine in cerebrovascular disease. 1989;117:236-42 (Symposium)

Fohlman J (see Ilbäck et al). 1989;117:1298-1302

Fohlman J (see Ilbäck et al). 1989;117:1298-1302
Folts JD (see DeBoer and Folts). 1989;117:973-5 (Brief comm.)
Forette F, McClaran J, Hervy MP, Bouchacourt P, Henry JF.
Nicardipine in elderly patients with hypertension: a review of
experience in France. 1989;117:256-61 (Symposium)
Foti R (see Russo et al). 1989;117:1385-7 (Brief comm.)
Fox-Eastham K (see Hite et al). 1989;117:569-76
Franco I (see Tuzcu et al). 1989;117:1374-7 (Prog. cardiol.)
Franklin, TD (see Choops et al.) 1989;117:819-29

Franco I (see Tuzcu et al). 1989;117:1374-7 (Frog. cardiol.)
Franklin TD (see Choong et al). 1989;117:3819-29
Franz MR (see Fain et al). 1989;117:358-64
Freeman MR, Williams AE, Chisholm RJ, Patt NL, Greyson ND, Armstrong PW. Role of resting thallium<sup>201</sup> perfusion in predicting coronary anatomy, left ventricular wall motion, and hospital outcome in unstable angina pectoris. 1989;117:306-14
Fricchione GL, Olson LC, Vlay SC. Psychiatric syndromes in patients with the automatic internal cardioverter defibrillator.

tients with the automatic internal cardioverter defibrillator: anxiety, psychological dependence, abuse, and withdrawal. 1989;117:1411-4 (Editorial)

Friedman J (see Kiat et al). 1989;117:1-11 Friehling TD (see O'Connor et al). 1989;117:848-53 Friman G (see Ilbäck et al). 1989;117:1298-1302 Frutchey J (see Chakko et al). 1989;117:1083-91 Fu M (see Hung et al). 1989;117:381-5 Fujii B (see Matsuda et al). 1989;117:1014-7

Fujiki A, Yoshida S, Mizumaki K, Sasayama S. Atrial automatic tachycardia with two different types of electrophysiologic characteristics. 1989;117:699-701 (Brief comm.)
Fujimura O, Jones DL, Klein GJ. The defibrillation threshold:

How many measurements are enough? 1989;117:977-9 (Brief

Fukagawa K (see Yoshino et al). 1989;117:1316-9 Fukuchi Y (see Abe et al). 1989;117:1223-33 Fuller HD (see Vannelli and Fuller). 1989;117:202-4 (Brief comm.) Fulop J (see Webb et al). 1989;117:485-6 (Brief comm.)

Furlanello F (see Guarnerio et al). 1989;117:1241-52 Furukawa T, Rozanski JJ, Moroe K, Gosselin AJ, Lister JW. Predictors of sustained ventricular tachycardia inducibility in patients with nonsustained ventricular tachycardia and chronic coronary artery disease. 1989;117:1050-9 Futterman L (see de Marchena et al). 1989;117:1173-4 (Brief

Fyfe DA, Gillette PC, Jones JS, Danielson GK. Successful preg-nancy following modified Fontan procedure in a patient with tricuspid atresia and recurrent atrial flutter. 1989;117:1387-8 (Brief comm.)

(see Johnson et al). 1989;117:690-2 (Brief comm.)

Gabathuler J (see de Bruyne et al). 1989;117:629-35 Galan K (see Deligonul et al). 1989;117:509-14 — (see Deligonul et al). 1989;117:997-1002 Galanti G (see Casolo et al). 1989;117:468-72 (Brief comm.) Ganguly PK, Beamish RE, Dhalla NS. Catecholog (in cardiotoxicity in pheochromocytoma. 1989;117:1399-400 (Letter) Garan H (see Estes et al). 1989;117:1060-4 Gaudiani V (see Winkle et al). 1989;117:122-7 Gayet C (see André-Fouet et al). 1989;117:892-902 (Curriculum cardiol.) Gazes PC (see Keil et al). 1989;117:1022-9 Geltman EM, Eisen HJ, Barzilai B, Jaffe AS. QRS scoring and an-terior and inferior MI size. 1989;117:1406 (Letter reply) — (see Devries et al). 1989;117:31-6 Gentile F (see Choong et al). 1989;117:636-42 Gerosa G (see Latini et al). 1989;117:497-8 (Brief comm.)

Geschwind HJ, Dubois-Randė J-C, Shafton E, Boussignac G, Wexman M. Percutaneous pulsed laser-assisted balloon angioplasty guided by spectroscopy. 1989;117:1147-52 (Prog. cardiol.) Ghali V (see Berdoff et al). 1989;117:688-90 (Brief comm.) Gheorghiade M (see Chakko et al). 1989;117:1083-91 Giacherio DA (see Nicklas et al). 1989;117:377-81 Giannattasio C, Grassi G, Seravalle G, Morganti A, Zanchetti A, Mancia G. Investigation of reflexes from volume and baroreceptors during converting-enzyme inhibition in 1989;117:740-5 (Symposium) Gibbons EF (see Choong et al). 1989;117:819-29 Gibbs HR (see Hustead et al). 1989;117:1383-5 (Brief comm.) Gillam LD (see Ascah et al). 1989;117:402-11 Gillette PC (see Fyfe et al). 1969;117:402-11 Gillette PC (see Fyfe et al). 1989;117:489-92 (Brief comm.) — (see Hays and Gillette). 1989;117:489-92 (Brief comm.) Giuffrida G (see Russo et al). 1989;117:1385-7 (Brief comm.) Glassman HN (see Luther et al). 1989;117:842-7 Gleim GW (see Coplan et al). 1989;117:1070-5 Gliner BE (see Murakawa et al). 1989;117:1065-9 Goldberg H (see Yang and Goldberg). 1989;117:1403-4 (Letter) Goldberg RJ, Gore JM, Gurwitz JH, Alpert JS, Brady P, Strohsnitter W, Chen Z, Dalen JE. The impact of age on the incidence and prognosis of initial acute myocardial infarction: the Worcester Heart Attack Study. 1989;117:543-9 Goldberg S (see Wappel et al). 1989;117:37-42 Goldenberg IF (see Limas et al). 1989;117:1310-6 Goldman B (see Berdoff et al). 1989;117:688-90 (Brief comm.) Gonçalves MT de FA (see Arie et al). 1989;117:201-2 (Brief comm.) Goodgold H (see Camp et al). 1989;117:702-4 (Brief comm.) Goormastic M (see Bruschke et al). 1989;117:296-305 Gore JM (see Goldberg et al). 1989;117:543-9 Gorman G (see Ring et al). 1989;117:1233-40 Gosselin AJ (see Furukawa et al). 1989;117:1050-9 Gosselin AJ (see Furukawa et al). 1989;117:100-9 Gowitz MH (see Stewart et al). 1989;117:140-4 Graham AR (see Ring et al). 1989;117:1233-40 Grassi G (see Giannattasio et al). 1989;117:1099-105 Greenberg B (see Bouchard et al). 1989;117:1099-105 Greenblatt DJ (see Estes et al). 1989;117:1060-4 Grekin R.J (see Nicklas et al.). 1989;117:377-81 Grenadier E, Margulis T, Palant A, Safadi T, Merin G. Huge cavernous hemangioma of the heart: a completely evaluated case report and review of the literature. 1989;117:479-81 (Brief comm. Greyson ND (see Freeman et al). 1989;117:306-14 Grimaldi DR (see Russo et al). 1989;117:1385-7 (Brief comm.) Grinberg M (see Arie et al). 1989;117:201-2 (Brief comm.)
Gromisch DS (see Stewart et al). 1989;117:140-4
Gross CM, Prisant LM, Paolini D, von Dohlen TW. Echocardiographic appearance of a flail bioprosthetic mitral valve leaflet

mimicking vegetation. 1989;117:953-7 (Brief comm.)
Gross GJ (see Al-Wathiqui et al). 1989;117:791-8
Guarnerio M, Furlanello F, Del Greco M, Vergara G, Inama G, Olisertori M. Transesophageal atrial pacing: a first-choice technique in atrial flutter therapy. 1989;117:1241-52 Guazzi MD (see Loaldi et al). 1989;117:315-22 Guettier C (see Michel et al). 1989;117:756-67 (Symposium) Guezennec A (see Bump et al). 1989;117:577-84 Gurwitz JH (see Goldberg et al). 1989;117:543-9

Haber E (see Rezkalla et al). 1989;117:391-5 Hackel DB (see Wagner and Hackel). 1989;117:1405-6 (Letter) Hackshaw BT (see Downes et al). 1989;117:1106-12 Haichin R (see Silberberg et al). 1989;117:532-7 Haitem NE (see Chaara et al). 1989;117:684-5 (Brief comm.) Halbe D (see Labovitz et al). 1989;117:1404 (Letter reply)
Haley NJ (see Wynder et al). 1989;117:649-56
Hallali P, Iung B, Davido A, Binet J-P, Leriche H, Corone P. Congenital diverticulum of the right ventricle: report of two cases associated with other congenital heart defects. 1989;117:957-9 (Brief comm.) Hamada Y (see Matsuda et al). 1989;117:1014-7 Hamer HPM (see Posma et al). 1989;117:1404 (Letter)
Hands ME, Rutherford JD. ECG diagnosis of MI in LBBB.
1989;117:1409 (Letter reply) Hanrath P (see Lambertz et al). 1989;117:615-22 Hansen JF. Coronary collateral circulation: clinical significance and influence on survival in patients with coronary artery occlusion. 1989;117:290-5

Haq A (see Webb et al). 1989;117:485-6 (Brief comm.)

report)

Haque AK (see Quintanilla and Haque). 1989;117:1378-9 (Brief Haque IU (see Bruschke et al). 1989:117:296-305 Harpole DA (see Davidson et al), 1989:117:411-7 Harrigan P (see Rosenzweig et al), 1989:117:962-3 (Brief comm.) Harrigan P (see Rosenzweig et al). 1989;117:962-3 (Brief comm.) Harris RE (see Wynder et al). 1989;117:649-56 Hart RG (see Presti and Hart). 1989;117:69-76 (Brief comm.) Hasegawa K (see Uchida et al). 1989;117:69-76 Hauser AM (see Pavlides et al). 1989;117:1390-2 (Brief comm.) Haverling M (see Jogestrand et al). 1989;117:1076-83 Hawkins HK (see Sharif et al). 1989;117:1333-6 Hayakawa T (see Abe et al). 1989;117:1223-33 Hays MD, Gillette PC. Atrial automatic ectopic tachycardia sucrays MD, dilette PC. Artial automatic ectopic tachycardia successfully treated with encainide in a 4-week-old infant after Senning procedure. 1989;117:489-92 (Brief comm.)

Hazen JF (see Narahara et al). 1989;117:1030-5

Heger JJ (see Miles et al). 1989;117:112-21

Heiss G (see Sheps and Heiss). 1989;117:177-84 (Prog. cardiol.)

Hendren WG (see Smith et al). 1989;117:475-9 (Brief comm.) Hendren WG (see Smith et al). 1989;117:475-9 (Brief comm.)
Henry JF (see Forette et al). 1989;117:256-61 (Symposium)
Herman MV (see Pucillo et al). 1989;117:482-5 (Brief comm.)
Hershfield E (see Long et al). 1989;117:133-9
Hervy MP (see Forette et al). 1989;117:256-61 (Symposium)
Hess KR (see Ostojic et al). 1989;117:256-61 (Symposium)
Hess KR (see Ostojic et al). 1989;117:37-42
Hester WL (see Ngo et al). 1989;117:385-90
Hickman JR Jr (see Batchelor et al). 1989;117:113-9
Hippogoankar R (see Agatston et al). 1989;117:1320-6
Hirsh PD (see Alpert et al). 1989;117:185-6 (Brief comm.)
Hite PR, Schröder E, Kieso RA, Fox-Eastham K, Kerber RE. Effect of calcium channel blockers on hemodynamic responses to defibrillation. 1989;117:569-76 defibrillation. 1989;117:569-76 Hoff P (see Duo et al). 1989;117:854-61 Hoff P (see Duo et al). 1989;117:854-61
Hogan RD (see Choong et al). 1989;117:819-29
Hoit BD, Penonen E, Dalton N, Sahn DJ. Doppler color flow mapping studies of jet formation and spatial orientation in obstructive hypertrophic cardiomyopathy. 1989;117:1119-26
Hollenberg M (see Knight et al). 1989;117:1374-7 (Prog. cardiol.)
Hollman J (see Tuzcu et al). 1989;117:1374-7 (Prog. cardiol.)
Hollman J (see Tuzcu et al). 1989;117:13765 (Rrief comm.) Holman AJ (see Mukerji et al). 1989;117:705 (Brief comm.) Honma H (see Ostrzega et al). 1989;117:444-52 (Prog. cardiol.) Hookman LD (see Bourdillon et al). 1989;117:492-5 (Brief comm.) Hornung CA (see McFarland et al). 1989;117:1209-14 Houston MC. New insights and new approaches for the treatment of essential hypertension: selection of therapy based on coronary heart disease risk factor analysis, hemodynamic profiles, quality of life, and subsets of hypertension. 1989;117:911-51 (Special

chemia. 1989;117:830-6 Huang SKS (see Ring et al). 1989;117:1233-40 Huang T-Y (see Wu et al). 1989;117:697-9 (Brief comm.) Hudson MB (see Keil et al). 1989;117:1022-9 Huhta JC (see Khan et al). 1989;117:1008-14 — (see Sharif et al). 1989;117:1333-6 Huikuri HV (see Ikäheimo et al). 1989;117:837-41 Humphries JO'N (see McFarland et al). 1989;117:1209-14 Hung J-S, Fu M, Cherng W-J, Inoue K, Tsai R-C, Ishibashi M, Yamaji T. Rapid fall in elevated plasma atrial natriuretic peptide levels after successful catheter balloon valvuloplasty of mitral stenosis. 1989;117:381-5 Huss-Randolph P (see Leier et al). 1989;117:1092-8 Hustead ST, Quick A, Gibbs HR, Werner CA, Maulik D. "Pseudo-critical" aortic stenosis during pregnancy: role for Doppler

Hovanessian L (see Jamison et al). 1989;117:607-14 Hoyt JC, Hutchins GM. Variceal transformation of the subendocardial microvasculature in regions of chronic myocardial is-

essment of aortic valve area. 1989;117:1383-5 (Brief comm.) Hutchins GM (see Hoyt and Hutchins). 1989;117:830-6 Hyakuna E (see Matsuda et al). 1989;117:1014-7

Ikäheimo MJ, Ruskoaho HJ, Airaksinen KEJ, Huikuri HV, Korhonen U-R, Leppäluoto PJ, Tuominen MO, Takkunen JT. Plasma levels of atrial natriuretic peptide during myocardial ischemia induced by percutaneous transluminal coronary angio-

plasty or dynamic exercise. 1989;117:837-41 Ilbäck N-G, Fohlman J, Friman G. Exercise in coxsackie B3 my-ocarditis: effects on heart lymphocyte subpopulations and the inflammatory reaction. 1989;117:1298-1302

Iliceto S (see Amico et al). 1989;117:195-8 (Brief comm.)

Inada M (see Matsubara et al). 1989;117:1407 (Letter reply)
Inama G (see Guarnerio et al). 1989;117:1241-52
Iñiguez A (see Alfonso et al). 1989;117:695-7 (Brief comm.)
Ino T, Akimoto K, Nishimoto K, Iwahara M, Boku H, Shimazaki S. Yabuta K. Myocarditis in Kawasaki disease, 1989:117:1400-1 (Letter) Inoue H (see Krause et al). 1989;117:550-61 Inoue K (see Hung et al). 1989;117:381-5 Inoue T (see Mohri et al). 1989;117:43-52 Interian A Jr (see Kessler et al). 1989;117:964-6 (Brief comm.) Iosa D, DeQuattro V, Lee DD-P, Elkayam U, Palmero H. Plasma norepinephrine in Chagas' cardioneuromyopathy: a marker of progressive dysautonomia. 1989;117:882-7
Ishibashi M (see Hung et al). 1989;117:381-5 Isner JM (see Eichhorn et al). 1989;117:1203-9 Iung B (see Hallali et al). 1989;117:957-9 (Brief comm.) Iwahara M (see Ino et al). 1989;117:1400-1 (Letter)

Jaffe AS (see Devries et al). 1989;117:31-6
— (see Geltman et al). 1989;117:1406 (Letter reply)
James FW (see Murphy et al). 1989;117:1327-32
Jamison M, Widerhorn J, Weber L, Campese V, Vasquez J, Hovanessian L, Rahimtoola SH, Elkayam U. Central and renal hemodynamic effects of a new agonist at peripheral dopamine- and beta-2 adrenoreceptors (dopexamine) in patients with heart failure. 1989;117:607-14

failure. 1989;117:607-14
Janosik DL (see Wittry et al). 1989;117:191-4 (Brief comm.)
Janssen EWL (see Cheriex et al). 1989;117:1394-6 (Brief comm.)
Janssen JHA (see Cheriex et al). 1989;117:1394-6 (Brief comm.)
— (see de Zwaan et al). 1989;117:657-65 (Curriculum cardiol.) Jentzen JM. Cocaine-induced myocarditis. 1989;117:1398 (Letter) gestrand T, Edner M, Haverling M. Clinical value of serum digoxin assays in outpatients: improvement by the standardiza-tion of blood sampling. 1989;117:1076-83 Johnson BL, Fyfe DA, Gillette PC, Kline CH, Sade R. In utero di-agnosis of interrupted aortic arch with transposition of the great

agnosis of interrupted aortic arch with transposition of the gre arteries and tricuspid atresia. 1989;117:690-2 (Brief comm.)
Johnston DL (see Rokey et al). 1989;117:952-3 (Brief comm.)
Jones DL (see Fujimura et al). 1989;117:977-9 (Brief comm.)
Jones EL (see Smith et al). 1989;117:75-9 (Brief comm.)
Jones JS (see Fyfe et al). 1989;117:387-8 (Brief comm.)
Jones RH (see Davidson et al). 1989;117:411-7
Jong Y-S (see Lo et al). 1989;117:382-6 (Brief comm.)
Jordan DC (see Luther et al). 1989;117:342-7 Juillerat L (see Nussberger et al). 1989;117:717-22 (Symposium)

Kaiser G, Ackermann R, Sioufi A. Pharmacokinetics of a new angiotensin-converting enzyme inhibitor, benazepril hydrochloride, in special populations. 1989;117:746-51 (Symposium) Kalra J (see Prasad et al). 1989;117:1196-202 Kamada T (see Masuyama et al). 1989;117:136-202 Kamada T (see Masuyama et al). 1989;117:133-9 Kamp O, Beatt KJ, De Feyter PJ, van den Brand M, Suryapranata H, Luijten HE, Serruys PW. Short-, medium-, and long-term follow-up after percutaneous transluminal coronary angioplasty for stable and unstable angina pectoris. 1989;117:991-6 Kannel WB. Detection and management of patients with silent myocardial ischemia. 1989;117:221-6 (Editoriai)

— (see Kreger et al). 1989;117:903-10 (Prog. cardiol.)
— (see Podgor et al). 1989;117:642-8

Kanter KR (see Stoddard et al). 1989;117:966-8 (Brief comm.) Kaplan J (see Barry et al). 1989;117:332-41 Karcier SM (see Özder et al). 1989;117:1407-8 (Letter) Karimeddini MF (see White et al). 1989;117:145-50 Kato K (see Ogasawara et al). 1989;117:804-8 Kaul A (see Stewart et al). 1989;117:140-4 Kavanaugh KM, Aisen AM, Fechner KP, Chenevert TL, Dunham

WR, Buda AJ. Regional metabolism during coronary occlusion, reperfusion, and recoclusion using phosphorus<sup>31</sup> nuclear magnetic resonance spectroscopy in the intact rabbit. 1989;117:53-9 Kawamura K (see Nishimura et al). 1989;117:100-5

Kecheng X (see Yamakado et al). 1989;117:1379-81 (Brief comm.)

— (see Uchida et al). 1989;117:769-76
Kay RH (see Pucillo et al). 1989;117:482-5 (Brief comm.)
Kaye KM, McKusick KA, Eagle KA. Pulmonary embolism masquerading as coronary insufficiency: clues to the diagnosis by exercise-thallium stress test. 1989;117:1169-71 (Brief comm.)

Keil JE, Gazes PC, Litaker MS, Saunders DE Jr, Weinrich MC, Baroody NB Jr, Lackland DT, Hudson MB. Changing patterns of acute myocardial infarction: decline in period prevalence and

delay in onset. 1989;117:1022-9
Kellam LJ (see Downes et al). 1989;117:1106-12
Kemper AJ (see Aragam et al). 1989;117:1392-4 (Brief comm.)
Kennedy HL, Wiens RD. Ambulatory (Holter) electrocardiography and myocardial ischemia. 1989;117:164-76 (Prog. cardi-

(see Stratmann and Kennedy). 1989;117:1344-65 (Curriculum cardiol.)

Kennedy JW (see Eaker et al). 1989;117:71-81 Kenny D. Thrombolytic therapy and steroids. 1989;117:1404-5

Kerber RE (see Hite et al). 1989;117:569-76 Kern MJ (see Deligonul et al). 1989;117:509-14 — (see Deligonul et al). 1989;117:997-1002 — (see Labovitz et al). 1989;117:1003-8

Keroack MA (see Aragam et al). 1989;117:1392-4 (Brief comm.)
Kessler KM, Interian A Jr, Cox M, Topaz O, De Marchena E.J,
Myerburg RJ. Proarrhythmia related to a kinetic and dynamic interaction of mexiletine and theophylline. 1989;117:964-6 (Brief

comm.)
Kesteloot H (see Rogiers et al). 1989;117:1278-83
Khan MAA, Al-Yousef S, Huhta JC, Bricker JT, Mullins CE, Sawyer W. Critical pulmonary valve stenosis in patients less than 1 year of age: treatment with percutaneous gradational balloon pulmonary valvuloplasty. 1989;117:1008-14
Khatib R (see Rezkalla et al). 1989;117:391-5
Khaw BA (see Rezkalla et al). 1989;117:391-5
Kiat H, Maddahi J, Roy LT, Van Train K, Friedman J, Resser K, Berman DS. Comparison of technetium 99m methoxy isobutyl isonitrile and thallium 201 for evaluation of coronary artery disease by planar and tomographic methods. 1989;117:1-11
Kidwell GA (see Sahar et al). 1989;117:562-8
Kieso RA (see Hite et al). 1989;117:569-76
Kimball TR, Daniels SR, Meyer RA, Knilans TK, Plowden JS, Schwartz DC. Color flow mapping in the diagnosis of coronary

Schwartz DC. Color flow mapping in the diagnosis of coronary artery fistula in the neonate: benefits and limitations. 1989;117:968-71 (Brief comm.)

King SB III (see Ellis et al). 1989;117:777-82

Kinoshita M (see Tsutamoto et al). 1989;117:599-606 Kinoshita S, Konishi G. Electrotonic inhibition and supernormal

Kinshita S, Konishi C. Electrotomic inhibition and suj conduction. 1989;117:1402-3 (Letter) Kirsh MM (see Nicklas et al). 1989;117:377-81 Kisslo J (see Davidson et al). 1989;117:411-7 — (see Sheikh et al). 1989;117:623-8 Kisslo K (see Davidson et al). 1989;117:411-7 — (see Sheikh et al). 1989;117:206-10 (Brief comm.)

Kitabatake A (see Masuyama et al). 1989;117:133-9 Klein GJ (see Fujimura et al). 1989;117:977-9 (Brief comm.) Klein LS (see Miles et al). 1989;117:112-21

Kligfield P (see Peller and Kligfield). 1989;117:1408-9 (Letter re-

Kligheid F (see Feller and A. 1989;117:690-2 (Brief comm.) ply)
Kline CH (see Johnson et al). 1989;117:690-2 (Brief comm.)
Klipstein RH (see Bogren et al). 1989;117:1214-22
Kloner RA (see Rezkalla and Kloner). 1989;117:706-8 (Editorial)
— (see Rezkalla et al). 1989;117:391-5
Kloppenborg PWC (see Tan et al). 1989;117:446-7 (Letter)
Klöpper JW (see Mügge et al). 1989;117:474-5py in ambulatory elderly patients with hypertension. 1989;117:250-5 (Symposium)

Knight AA, Hollenberg M, London MJ, Mangano DT, S.P.I. Re-search Group. Myocardial ischemia in patients awaiting coronary artery bypass grafting. 1989;117:1189-95 Knilans TK (see Kimball et al). 1989;117:968-71 (Brief comm.)

Knudtson ML (see MacIsaac et al). 1989;117:783-90 Kodama K (see Masuyama et al). 1989;117:133-9 Koiwaya Y (see Unoki et al). 1989;117:1159-61 (Brief comm.) Komsuoglu B (see Littler and Komsuoglu). 1989;117:723-8 (Symposium)

Konishi G (see Kinoshita and Konishi). 1989;117:1402-3 (Letter) Konstam MA (see Eichhorn et al). 1989;117:1203-9 Korhonen U-R (see Ikâheimo et al). 1989;117:837-41

Kou WH (see Baerman et al). 1989;117:342-7 —(see Pinto et al). 1989;117:1283-7 Kourouklis KV (see Michaelides et al). 1989;117:1035-41 Kowey PR (see O'Connor et al). 1989;117:848-53

Krakoff LR. Nicardipine monotherapy in ambulatory elderly patients with hypertension. 1989;117:250-5 (Symposium)

Kramer JR Jr (see Bruschke et al). 1989;117:296-305 Krause PC, Inoue H, Zipes DP. Electrophysiologic alterations produced by hypoxia in the canine heart. 1989;117:550-61 Kreger BE, Anderson KM, Kannel WB. Prevalence of intraven-

Kreger BE, Anderson KM, Kannel WB. Prevalence of intraventricular block in the general population: the Framingham Study. 1989;117:903-10 (Prog. cardiol.)
Kronmal R (see Eaker et al). 1989;117:17-81
Kronzon I (see Tunick et al). 1989;117:11-7
Krueger SK (see Orme et al). 1989;117:11-7

Kruyer WB (see Drime et al). 1989;117:11-7 Kruyer WB (see Batchelor et al). 1989;117:100-5 Kubota J (see Nishimura et al). 1989;117:100-5 Küçükoğlu S (see Özder et al). 1989;117:1407-8 (Letter) Kugler JD, Danford DA. Pacemakers in children: an update. 1989;117:665-79 (Curriculum cardiol.)

Kühl Ú (see Wolff et al). 1989;117:1303-9 Kupersmith J (see Duo et al). 1989;117:854-61 Küpper AJF (see Verheugt et al). 1989;117:1018-22 Kuroiwa A (see Abe et al). 1989;117:1223-33 Kus T (see Dubuc et al). 1989;117:370-6

L'Abbate A (see Simonetti et al). 1989;117:323-31
Labovitz AJ, Bryg RJ, Halbe D. Doppler-estimated mitral valve area. 1989;117:1404 (Letter reply)

—, Lewen M, Kern MJ, Vandormael M, Mrosek DG, Byers SL, Pearson AC, Chaitman BR. The effects of successful PTCA on left ventricular function: assessment by exercise echocardiography. 1989;117:1003-8

graphy. 1989;117:1003-8

— (see Stoddard et al). 1989;117:395-402
— (see Stoddard et al). 1989;117:396-8 (Brief comm.)

Lackland DT (see Keil et al). 1989;117:1022-9

Lambert C (see Dubuc et al). 1989;117:370-6

Lambertz H, Minale C, Flachskampf FA, Zander M, Bardos P, Messmer BJ, Hanrath P. Long-term follow-up after Carpentier tricuspid valvuloplasty. 1989;117:615-22

Lamfers EJP (see Tan et al). 1989;117:1406-7 (Letter)

Latham RD, Mulrow JP, Virmani R, Robinowitz M, Moody JM. Recently diagnosed idiopathic dilated cardiomyopathy: incidence of myocarditis and efficacy of prednisone therapy. 1989;117:876-82 1989;117:876-82

Latini R, Barbieri E, Castello C, Marchi S, Sica A, Gerosa G, Rossi R, Zardini P. Propafenone and 5-hydroxypropafenone concentrations in the right atrium of patients undergoing heart surgery. 1989;117:497-8 (Brief comm.)

Latour J-G (see de Lorgeril et al). 1989;117:523-32 Lavallée M (see de Lorgeril et al). 1989;117:523-32 Lawson WE (see Vlay et al). 1989;117:980-6 (Editorial) Leclercq JF (see Bayés de Luna et al). 1989;117:151-9 (Curriculum

Lee BI (see Barry et al). 1989;117:332-41
Lee DD-P (see Iosa et al). 1989;117:882-7
Lees KR (see Reid et al). 1989;117:751-5 (Symposium)
Lefer AM (see Bhat et al). 1989;117:799-803
Leier CV, Binkley PF, Starling RC, Huss-Randolph P. Disparity
between improvement in left ventricular function and changes in clinical status and exercise capacity during chronic enoximone therapy. 1989;117:1092-8

Leizorovicz A (see André-Fouet et al). 1989;117:892-902 (Curric-

ulum cardiol.)
Lemmer JH (see Nicklas et al). 1989;117:377-81
Leonetti G. The clinical performance of nicardipine in elderly hypertensive patients with concomitant diseases. 1989;117:266-9 (Symposium)

(Symposium)
Leppäluoto PJ (see Ikäheimo et al). 1989;117:837-41
Lerch R (see de Bruyne et al). 1989;117:629-35
Leriche H (see Hallali et al). 1989;117:957-9 (Brief comm.)
Leung MP (see Lo et al). 1989;117:1157-9 (Brief comm.)
Lev M (see Ring et al). 1989;117:1233-40
Levin RN (see Pavlides et al). 1989;117:1390-2 (Brief comm.)
Levin RA (see Choong et al). 1989;117:1003-8
Lewis SA (see Old et al). 1989;117:1003-8

Lewis SA (see Old et al). 1989;117:1105-7 (Brief comm.)
Lichtlen PR (see Mügge et al). 1989;117:474-5 (Brief comm.)
Lie KI (see Posma et al). 1989;117:1404 (Letter)
— (see van Wijk et al). 1989;117:365-9
Lieberman EH (see Mok et al). 1989;117:1171-3 (Brief comm.)
Lilly LS (see Mok et al). 1989;117:1171-3 (Brief comm.)

Limas C (see Limas et al). 1989;117:1310-6

Limas CJ, Limas C, Goldenberg IF. Intracellular distribution of adrenoceptors in the failing human myocardium. 1989;117:1310-

Lin F-C (see Yeh et al). 1989;117:1041-9 Lin F-Y (see Lo et al). 1989;117:959-62 (Brief comm.) Lin Y-T (see Wu et al). 1989;117:697-9 (Brief comm.) Lisbona R (see Silberberg et al). 1989;117:532-7

Lisbona R (see Silberberg et al). 1989;117:532-7
Lister JW (see Furukawa et al). 1989;117:1050-9
Litaker MS (see Keil et al). 1989;117:1022-9
Little WC (see Downes et al). 1989;117:106-12
Littler WA. Nicardipine in the elderly hypertensive: a review of experience in the United Kingdom. 1989;117:262-5 (Sympo-

, Komsuoglu B. Which is the most accurate method of mea-

suring blood pressure? 1989;117:723-8 (Symposium) Lloyd TR, Marvin WJ Jr. Age at death in the hypoplastic left heart syndrome: multivariate analysis and importance of the coronary

arteries. 1989;117:1337-43

Lo H-M, Lin F-Y, Jong Y-S, Tseng Y-Z, Wu T-L. Ebstein's anomaly with ventricular tachycardia: evidence for the arrhythmogenic role of the atrialized ventricle. 1989;117:959-62 (Brief

Lo RNS, Leung MP, Yau KK, Cheung DLC. Transvenous ante-grade balloon angioplasty for recoarctation of the aorta in an infant. 1989;117:1157-9 (Brief comm.) Loaldi A, Fabbiocchi F, Montorsi P, De Cesare N, Bartorelli A, Polese A, Guazzi MD. Different coronary vasomotor effects of nifedipine and therapeutic correlates in angina with spontaneous and effort components versus Prinzmetal angina. 1989;117:315-22

Loge D (see Bouchard et al). 1989;117:1099-1105 London MJ (see Knight et al). 1989;117:1189-95 Long R, Younes M, Patton N, Hershfield E. Tuberculous pericarditis: long-term outcome in patients who received medical therapy alone. 1989;117:1133-9

Longmore DB (see Bogren et al). 1989;117:1214-22 Lown B (see Saini et al). 1989;117:1253-8 Luijten HE (see Kamp et al). 1989;117:991-6 Luther RR, Glassman HN, Estep CB, Maurath CJ, Jordan DC. The effects of terazosin and methyclothiazide on blood pressure

and serum lipids. 1989;117:842-7 Luzza F (see Oreto et al). 1989;117:1403 (Letter reply) Lyerly HK (see Sheikh et al). 1989;117:623-8

Macaya C (see Alfonso et al). 1989;117:695-7 (Brief comm.) Macdonald NJ (see Reid et al). 1989;117:751-5 (Symposium) MacIsaac HC, Knudtson ML, Robinson VJ, Manyari DE. Is the residual translesional pressure gradient useful to predict re-gional myocardial perfusion after percutaneous transluminal coronary angioplasty? 1989;117:783-90 Maddahi J (see Kiat et al). 1989;117:1-11

—— (see Ostrzega et al). 1989;117:444-52 (Prog. cardiol.)
Madrid W (see de Marchena et al). 1989;117:1173-4 (Brief comm.)
Mallon SM (see Chahine and Mallon). 1989;117:186-8 (Brief

Mancia G (see Giannattasio et al). 1989;117:740-5 (Symposium) Mancini GBJ (see Pinto et al). 1989;117:1283-7 Mangano DT (see Knight et al). 1989;117:1189-95

Mann DL (see Choong et al). 1989;117:1193-95 Mann DL (see Choong et al). 1989;117:1192-95 Manning WJ (see Ferguson et al). 1989;117:127-32 Manolis AS (see Estes et al). 1989;117:1060-4 Manyari DE (see MacIsaac et al). 1989;117:783-90 Marantz P (see Sharif et al). 1989;117:1333-6

Marchi S (see Latini et al). 1989;117:497-8 (Brief comm.)
Margulis T (see Grenadier et al). 1989;117:479-81 (Brief comm.)

Margulis T (see Grenadier et al). 1989;117:479-81 (Brief comm.)
Maroko PR (see Wappel et al). 1989;117:37-42
Martinell J (see Torrecilla et al). 1989;117:1389-90 (Brief comm.)
Marvin WJ Jr (see Lloyd and Marvin). 1989;117:1337-43
Marzilli M (see Simonetti et al). 1989;117:123-3-1
Mason JW (see Orme et al). 1989;117:11-7
— (see Orme et al). 1989;117:468-72 (Brief comm.)
Masotti G (see Casolo et al). 1989;117:468-72 (Brief comm.)
Masotti G (see Casolo et al). 1989;117:468-72 (Brief comm.)

Massie BM (see Bouchard et al). 1989;117:1099-105 Masuda T (see Yamakado et al). 1989;117:1379-81 (Brief comm.)
Masuyama T, Kitabatake A, Kodama K, Uematsu M, Nakatani S,
Kamada T. Semiquantitative evaluation of aortic regurgitation by Doppler echocardiography: effects of associated mitral stenosis. 1989:117:133-9

Matsubara H, Mori Y, Inada M. ANP in AMI. 1989;117:1407

(Letter reply)
Matsuda Y, Fujii B, Takashiba K, Hamada Y, Ohno H, Ebihara
H, Hyakuna E. Presence of angina pectoris before acute myo-cardial infarction and degree of residual stenosis after coronary thrombolysis. 1989;117:1014-7

— (see Yoshino et al). 1989;117:1316-9

Matsui S, Murakami E, Takekoshi N, Nakatou H, Enyama H,
Takeda F. Myocardial tissue characterization by magnetic resonance imaging in Fabry's disease. 1989;117:472-4 (Brief comm.)

Matsuo H (see Nakatani et al). 1989;117:486-9 (Brief comm.)

Mattox KL (see Rokey et al). 1989;117:952-3 (Brief comm.) Maulik D (see Hustead et al). 1989;117:1383-5 (Brief comm.) Maurath CJ (see Luther et al). 1989;117:842-7

McCann R (see Sheikh et al). 1989;117:256-61 (Symposium)
McGaran J (see Forette et al). 1989;117:256-61 (Symposium)
McFarland KF, Boniface ME, Hornung CA, Earnhardt W,
Humphries JO'N. Risk factors and noncontraceptive estrogen use in women with and without coronary disease. 1989;117:1209-

McGillem MJ (see Pinto et al). 1989;117:1283-7 McKusick KA (see Kaye et al). 1989;117:1169-71 (Brief comm.) Mead RH (see Winkle et al). 1989;117:122-7

Meier B (see de Bruyne et al). 1989;117:629-35 Meijer A (see Verheugt et al). 1989;117:1018-22 Mena I (see Narahara et al). 1989;117:1030-5

Ménard J. Symposium on modern methods of investigating con-

verting enzyme inhibition: Introduction: aims of the symposium. 1989;117:715-6 (Symposium)

— (see Michel et al). 1989;117:756-67 (Symposium)

— (see Nussberger et al). 1989;117:717-22 (Symposium)

Merin G (see Grenadier et al). 1989;117:479-81 (Brief comm.)

Messmer BJ (see Lambertz et al). 1989;117:615-22 Metcalfe M (see Smith et al). 1989;117:475-9 (Brief comm.)

Metherall JA (see Eichhorn et al). 1989;117:1203-9
Meyer RA (see Kimball et al). 1989;117:968-71 (Brief comm.)
Michaelides AP, Vyssoulis GP, Triposkiadis FK, Papadakis PV,
Kourouklis KV, Toutouzas PK. Significance of ST segment depression in exercise-induced supraventricular extrasystoles. 1989;117:1035-41

1989;117:1035-41
Michel J-B, Guettier C, Reade R, Sayah S, Corvol P, Ménard J.
Immunologic approaches to blockade of the renin-angiotensin system: a review. 1989;117:756-67 (Symposium)
Michelassi C (see Simonetti et al). 1989;117:323-31
Mickelson JK (see Pinto et al). 1989;117:1283-7
Miles WM, Heger JJ, Minardo JD, Klein LS, Prystowsky EN,
Zipes DP. The electrophysiologic effects of enoximone in patients with preexisting ventricular tachyarrhythmias. 1989:117:112-21 1989:117:112-21

MILIS Study Group (see Pohjola-Sintonen et al). 1989;117:809-18 MILIS Study Group (see Tofler et al). 1989;117:86-92 Miller DH (see Schreiber et al). 1989;117:435-43 (Curriculum car-

Millette D (see de Lorgeril et al). 1989;117:523-32 Milon H (see André-Fouet et al). 1989;117:892-902 (Curriculum cardiol.)

Minale C (see Lambertz et al). 1989;117:615-22 Minardo JD (see Miles et al). 1989;117:112-21

Mitrani A (see de Marchena et al). 1989;117:1173-4 (Brief comm.) Mitrovic V, Thormann J, Neuzner J, Bahawar H, Volz M, Dieterich H-A, Schlepper M. Hemodynamic, antiischemic, and neurohumoral effects of enoximone in patients with coronary artery disease. 1989;117:106-11

Miura DS (see Dangman et al). 1989;117:1271-7 Miyamoto T (see Yoshino et al). 1989;117:1316-9

Miyatake K (see Nakatani et al). 1989;117:486-9 (Brief comm.) Mizumaki K (see Fujiki et al). 1989;117:699-701 (Brief comm.)

Mohiaddin RH (see Bogren et al). 1989;117:1214-22
Mohri M, Tomoike H, Inoue T, Nakamura M. Amelioration by β-adrenergic blockade of regional myocardial dysfunction induced by coronary artery occlusion after, but not before collateral de-

velopment in conscious dogs. 1989;117:43-52 Mohsenifar Z, Amin DK, Shah PK. Regional distribution of lung perfusion and ventilation in patients with chronic congestive heart failure and its relationship to cardiopulmonary hemody-

namics. 1989;117:887-91 Mok P, Lieberman EH, Lilly LS, Schafer AI, DiSesa VJ, Rutherford CR. Severe hemolytic anemia following mitral valve repair. 1989;117:1171-3 (Brief comm.)

Montemartini C (see Previtali et al). 1989;117:92-9

Montorsi P (see Loaldi et al). 1989;117:315-22 Moody JM (see Latham et al). 1989;117:876-82 Morady F (see Baerman et al). 1989;117:342-7 Morganti A (see Giannattasio et al). 1989;117:740-5 (Symposium) Mori K, Dohi T. Mitral and pulmonary vein blood flow patterns in cor triatriatum. 1989;117:1167-9 (Brief comm.)

Mori Y (see Matsubara et al). 1989;117:1407 (Letter reply) Moroe K (see Furukawa et al). 1989;117:1050-9 Morris SN (see Bourdillon et al). 1989;117:492-5 (Brief comm.)

Moskowitz D (see Nicklas et al). 1989;117:397-81

Mrosek DG (see Labovitz et al). 1989;117:1003-8

— (see Stoddard et al). 1989;117:395-402

Migge A, Daniel WG, Wolpers HG, Klöpper JW, Lichtlen PR. Improved visualization of discrete subvalvular aortic stenosis by transesophageal color-coded Doppler echocardiography. 1989;117:474-5 (Brief comm.)

Muiesan S (see Carretta et al). 1989;117:229-35 (Symposium)
Mukerji V, Holman AJ, Alpert MA. The clinical description of
angina pectoris in the elderly. 1989;117:705 (Brief comm.)
Muller JE (see Pohjola-Sintonen et al). 1989;117:809-18

(see Tofler et al). 1989;117:86-92 Mullins CE (see Khan et al). 1989;117:1008-14 Mulrow JP (see Latham et al). 1989;117:876-82

Mulvagh SL (see Rokey et al). 1989;117:952-3 (Brief comm.) Murakami E (see Matsui et al). 1989;117:472-4 (Brief comm.) Murakawa Y, Gliner BE, Shankar B, Thakor NV. The effect of an unsuccessful subthreshold shock on the energy requirement for the subsequent defibrillation. 1989;117:1065-9

Murphy AM, Blades M, Daniels S, James FW. Blood pressure and cardiac output during exercise: a longitudinal study of children

undergoing repair of coarctation. 1989;117:1327-32 Murphy ML (see Peng et al). 1989;117:515-22 Mutter ML (see Shawl et al). 1989;117:537-42

Myerburg RJ (see de Marchena et al). 1989;117:1173-4 (Brief

— (see Kessler et al). 1989;117:964-6 (Brief comm.)
Myhre E (see Myreng and Myhre). 1989;117:870-5
Myreng Y, Myhre E. Effects of verapamil on left ventricular
relaxation and filling dynamics in coronary artery disease: a
study by pulsed Doppler echocardiography. 1989;117:870-5

Nademanee K (see Stevenson et al). 1989;117:452-67 (Prog. cardi-

Nagamoto Y (see Abe et al). 1989;117:1223-33 Nagata S (see Nakatani et al). 1989;117:486-9 (Brief comm.) Nakagawa S (see Unoki et al). 1989;117:1159-61 (Brief comm.)

Nakamura F (see Ogasawara et al). 1989;117:804-8

(see Tomaru et al). 1989;117:275-81

Nakamura M (see Mohri et al). 1893;117:43-52
Nakamo T (see Yamakado et al). 1989;117:43-52
Nakatani S, Beppu S, Miyatake K, Matsuo H, Nagata S, Nimura Y. Interruption of aortic regurgitation by the intimal flap of an aortic dissection: Doppler echocardiographic observations. 1989;117:486-9 (Brief comm.)

— (see Masuyama et al). 1989;117:133-9
Nakatou H (see Matsui et al). 1989;117:472-4 (Brief comm.)
Narahara KA, Thompson CJ, Hazen JF, Brizendine M, Mena I.
The effect of beta blockade on single photon emission computed tomographic (SPECT) thallium-201 images in patients with

coronary disease. 1989;117:1030-5 Nardella P (see Barry et al). 1989;117:332-4

Nelson SD (see Baerman et al). 1989;117:342-7 Nesmith JW (see Sheikh et al). 1989;117:206-10 (Brief comm.)

Neuzner J (see Mitrovic et al). 1989;117:106-11 Newell JB (see Ascah et al). 1989;117:402-11

Newlands JS (see Bouchard et al). 1893;117:402-11
Newlands JS (see Bouchard et al). 1893;117:1099-105
Newton MT (see Ngo et al). 1989;117:385-90
Ngo L, Wyeth RP, Bissett JK, Hester WL, Newton MT, Sallman
AL, Winters CJ, Vesely DL. Prohormone atrial natriuretic peptides 1-30, 31-67, and 99-126 increase in proportion to right

ventricular pacing rate. 1989;117:385-90 Nicholas JA (see Coplan et al). 1989;117:1070-5

Nicklas JM, Giacherio DA, Moskowitz D, Lemmer JH, Kirsh MM, Grekin RJ. Natriuresis associated with elevated plasma atrial natriuretic hormone during supraventricular tachycardia. 1989:117:377-81

Nielsen D (see Andersen et al). 1989;117:82-6 Nimura Y (see Nakatani et al). 1989;117:486-9 (Brief comm.)

Nishimoto K (see Ino et al). 1989;117:1400-1 (Letter) Nishimura H, Kubo S, Ueyama M, Kubota J, Kawamura K. Pe-

ripheral hemodynamic effects of captopril in patients with con-

ripheral nemodynamic effects of captopril in patients with congestive heart failure. 1989;117:100-5

Niwano S, Aizawa Y, Satoh M, Shibata A. Low-energy electrical catheter ablation of sustained ventricular tachycardia originating from the right ventricle. 1989;117:1165-7 (Brief comm.)

Nolting M (see Choong et al). 1989;117:819-29

Nomeir A.M (see Downes et al). 1989;117:1106-12
Nussberger J, Juillerat L, Perret F, Waeber B, Bellet M, Brunner
HR, Ménard J. Need for plasma angiotensin measurements
to investigate converting-enzyme inhibition in humans.
1989;117:717-22 (Symposium)

Nygaard TW (see Reed et al). 1989;117:60-71

O'Connor KM, Friehling TD, Kowey PR. The effect of thrombox-ane inhibition on vulnerability to ventricular fibrillation in the acute and chronic feline infarction models. 1989;117:848-53 Ogasawara K, Aizawa T, Nakamura F, Kato K. Angina preceding

myocardial infarction and residual coronary narrowing after intracoronary thrombolysis. 1989;117:804-8

Ogilby JD (see Chan et al). 1989;117:1140-6 (Curriculum cardiol.)
Ohman EM (see Wiseman et al). 1989;117:134-3 (Brief comm.)
Ohno H (see Matsuda et al). 1989;117:1014-7
Old WD, Paulsen W, Lewis SA, Nixon JV. Pacemaker leadinduced tricuspid stenosis: diagnosis by Doppler echocardio-

induced tricuspid stenosis: diagnosis by Doppler echocardio-graphy. 1989;117:1165-7 (Brief comm.)
Oldridge NB, Connolly C. Oxygen uptake and heart rate during cross-country skiing and track walking after myocardial infarc-tion. 1989;117:495-7 (Brief comm.)
Olson LC (see Fricchione et al). 1989;117:1411-4 (Editorial)
Oreto G, Satullo G, Luzza F. Electrotonic inhibition and super-normal conduction. 1989;117:1403 (Letter reply)
Orme EC, Wray RB, Barry WH, Krueger SK, Mason JW.
Comparison of three techniques for percutaneous balloon aortic valvuloulasty of gortic stenosis in adults. 1989:117:11-7

valvuloplasty of aortic stenosis in adults. 1989;117:11-7

—, —, Mason JW. Balloon mitral valvuloplasty via retrograde left atrial catheterization. 1989;117:680-3 (Prog. cardiol.)
Osborne JA (see Bhat et al). 1989;117:799-803
Ostojic MC, Young JB, Hess KR, Belgrade University/Baylor College of Medicine Cardiology Research Group. Prediction of left ventricular ejection fraction using a unique method of chest x-ray and ECG analysis: a noninvasive index of cardiac performance based on the concept of heart volume and mass interre-lationship. 1989;117:590-8

Ostrzega E, Maddahi J, Honma H, Crues JV III, Resser KJ, Charuzi Y, Berman DS. Quantification of left ventricular myocardial mass in humans by nuclear magnetic resonance imaging.

1989;117:444-52 (Prog. cardiol.)
Özder AB, Küçükoğlu S, Doğar H, Karcier SM, Demiroğlu C. Exercise-induced AV block. 1989;117:1407-8 (Letter)

Palacios IF (see Brandi-Pifano et al). 1989;117:25-31 Palant A (see Grenadier et al). 1989;117:479-81 (Brief comm.) Palmero H (see Iosa et al). 1989;117:882-7 Panciroli C (see Gross et al). 1989;117:92-9 Paolini D (see Gross et al). 1989;117:953-7 (Brief comm.)

Papadakis PV (see Michaelides et al). 1989;117:1035-41 Parker CB (see Pohjola-Sintonen et al). 1989;117:809-18 Patt NL (see Freeman et al). 1989;117:306-14

Patton N (see Long et al). 1989;117:1133-9
Paulsen W (see Old et al). 1989;117:1165-7 (Brief comm.)
Pavlides GS, Levin RN, Hauser AM. Left ventricular recurrence
of a resected left atrial myxoma. 1989;117:1390-2 (Brief comm.) Pearl W. Regression of endocardial fibroelastosis. 1989;117:1401

(Letter) Pearson AC (see Labovitz et al). 1989;117:1003-8

— (see Stoddard et al). 1989;117:966-8 (Brief comm.)
Peels CH (see Verheugt et al). 1989;117:1018-22
Pelc L (see Al-Wathiqui et al). 1989;117:791-8
Peller OG, Kligfield P. Exercise-induced AV block. 1989;117:1408-

9 (Letter reply)

Peng CF, Murphy ML, Colwell K, Straub KD. Controlled versus hyperemic flow during reperfusion of jeopardized ischemic my-ocardium. 1989;117:515-22

Penn OCKM (see Cheriex et al). 1989;117:1394-6 (Brief comm.)
—— (see de Zwaan et al). 1989;117:657-65 (Curriculum cardiol.)
Penonen E (see Hoit et al). 1989;117:1119-26

Pérez MR (see Torrecilla et al). 1989;117:1119-26
Pérez MR (see Torrecilla et al). 1989;117:11389-90 (Brief comm.)
Perret F (see Nussberger et al). 1989;117:717-22 (Symposium)
Pflugfelder PW, Sechtem UP, White RD, Cassidy MM, Schiller
NB, Higgins CB. Noninvasive evaluation of mitral regurgitation by analysis of left atrial signal loss in cine magnetic resonance. 1989:117:1113-9

Pileggi F (see Arie et al), 1989:117:201-2 (Brief comm.) Pillot M (see André-Fouet et al). 1989;117:892-902 (Curriculum

Pindborg T (see Svanegaard et al). 1989;117:194-5 (Brief comm.)
Pinto IMF, Kou WH, McGillem MJ, DeBoe SF, Mickelson JK, Mancini GBJ. Induction of ventricular arrhythmia by high and low osmolarity ionic and nonionic contrast media. 1989;117:1283-

Pless B (see Winkle et al). 1989;117:122-7

Plowden JS (see Kimball et al.) 1989;117:968-71 (Brief comm.)
Podgor MJ, Kannel WB, Cassel GH, Sperduto RD. Lens changes
and the incidence of cardiovascular events among persons with
diabetes. 1989;117:642-8

Podrid PJ. Spontaneous reversion of VF, 1989:117:1401-2 (Letter reply)

(see Saini et al). 1989;117:1253-8

Poggesi L (see Casolo et al). 1989;117:468-72 (Brief comm.)
Pohjola-Sintonen S, Muller JE, Stone PH, Willich SN, Antman
EM, Davis VG, Parker CB, Braunwald E, MILIS study group. Ventricular septal and free wall rupture complicating acute my-ocardial infarction: experience in the Multicenter Investigation of Limitation of Infarct Size. 1989;117:809-18

Pohost GM (see Bouchard et al). 1989;117:281-9 Polakoff R (see Agatston et al). 1989;117:1320-6 Polese A (see Loaldi et al). 1989;117:315-22 Pollick C. LA enlargement in hypertension. 1989;117:1409-10

(Letter)

Poole WK (see Tofler et al). 1989;117:86-92 Popvic AD (see Rosenzweig et al). 1989;117:962-3 (Brief comm.) Posma JL, Hamer HPM, Lie KI. Doppler-estimated mitral valve

area. 1989;117:1404 (Letter)
Poulter NR (see Sever et al). 1989;117:735-9 (Symposium)
Prasad K, Kalra J, Chan WP, Chaudhary AK. Effect of oxygen free radicals on cardiovascular function at organ and cellular levels. 1989;117:1196-202

Presti CF, Hart RG. Thyrotoxicosis, atrial fibrillation, and embo-

Previsited. 1989;117:976-7 (Brief comm.)

Previsali M, Panciroli C, De Ponti R, Chimienti M, Montemartini C, Salerno JA. Time-related decrease in sensitivity to ergonovine in patients with variant angina. 1989;117:92-9

Priori SG (see Facchini et al). 1989;117:1258-64

Prisant LM (see Gross et al). 1989;117:953-7 (Brief comm.)
Prystowsky EN (see Miles et al). 1989;117:112-21
Pucillo AL, Schechter AG, Kay RH, Herman MV. Magnetic resonance imaging of vascular conduits in coarctation of the aorta. 1989;117:482-5 (Brief comm.) Pulido JI (see Brandi-Pifano et al). 1989;117:25-31

Quick A (see Hustead et al). 1989;117:1383-5 (Brief comm.)
Quintanilla MA, Haque AK. Thrombotic obstruction of prosthetic aortic valve presenting as acute myocardial infarction. 1989;117:1378-9 (Brief comm.)

Rábago G (see Torrecilla et al). 1989;117:1389-90 (Brief comm.) Radovsky AS, Van Vleet JF. Effects of dexamethasone elution on tissue reaction around stimulating electrodes of endocardial pacing leads in dogs. 1989;117:1288-98 Rahimtoola SH. The hibernating myocardium. 1989;117:211-21

(Editorial)

— (see Jamison et al). 1989;117:607-14
Ramsdale DR, Schofield PM. Endomyocardial trauma during balloon mitral valvuloplasty. 1989;117:685-7 (Brief comm.)
Rao PS. Which aortic coarctations should we balloon-dilate? 1989;117:987-9 (Editorial)

Rati MAN (see Arie et al). 1989;117:201-2 (Brief comm.) Reade R (see Michel et al). 1989;117:756-67 (Symposium)

Rechavia E (see Strasberg et al). 1989;117:160-3 (Curriculum car-

diol.)

Reed DC, Beller GA, Nygaard TW, Tedesco C, Watson DD, Burwell LR. The clinical efficacy and scintigraphic evaluation of post-coronary bypass patients undergoing percutaneous traisluminal coronary angioplasty for recurrent angina pectoris. 1989;117:60-71

Rees RSO (see Bogren et al). 1989;117:1214-22

Reeves RC (see Bouchard et al). 1989;117:281-9
Reid JL, Macdonald NJ, Lees KR, Elliott HL. Angiotensin-converting enzyme inhibitors in the elderly. 1989;117:751-5 (Symposium)

Reiffel JA (see Sahar et al). 1989;117:562-8 Resser KJ (see Kiat et al). 1989;117:1-11

(see Ostrzega et al). 1989;117:444-52 (Prog. cardiol.)

Reyes E (see Stewart et al). 1989;117:140-4 Rezkalla SH, Kloner RA. Management strategies in viral myo-carditis. 1989;117:706-8 (Editorial)

-, Khaw BA, Haber E, Fallon JT, Smith FE, Khatib R. Detection of experimental myocarditis by monoclonal antimyosin antibody, Fab fragment. 1989;117:391-5
Ring ME, Huang SKS, Graham AR, Gorman G, Bharati S, Lev M.

Catheter ablation of the ventricular septum with radiofrequency energy. 1989;117:1233-40
Ripley KL (see Bump et al). 1989;117:577-84
Riuli EP (see Ferguson et al). 1989;117:18-24
Rizzo A (see Amico et al). 1989;117:195-8 (Brief comm.)

Rizzon P (see Amico et al). 1989;117:195-8 (Brief comm.)

Roan H-R (see Wu et al). 1989;117:697-9 (Brief comm.)
Roberts WC. Recent studies on the effects of beta blockers on blood lipid levels. 1989;117:709-14 (Editorial)

Robertson T (see Tofler et al). 1989;117:86-92 Robinowitz M, Virmani R, Smialek JE. Cocaine-induced myo-carditis. 1989;117:1398-9 (Letter reply)

— (see Latham et al). 1989;117:876-82 Robinson VJ (see MacIsaac et al). 1989;117:783-90 Rodrigo JL (see Alfonso et al). 1989;117:695-7 (Brief comm.) Rogiers P, Vermeir W, Kesteloot H, Stroobandt R. Effect of the infusion of magnesium sulfate during atrial pacing on ECG in-tervals, serum electrolytes, and blood pressure. 1989;117:1278-

Rokey R, Mulvagh SL, Cheirif J, Mattox KL, Johnston DL. Lipomatous encasement and compression of the heart: ante-mortem diagnosis by cardiac nuclear magnetic resonance imag-ing and catheterization. 1989;117:952-3 (Brief comm.)

Roos JP (see Verheugt et al). 1989;117:1018-2

Roos JP (see Verheugt et al). 1989;117:1018-22 Rosengarten M (see Dubuc et al). 1989;117:370-6 Rosenzweig A, Harrigan P, Popvic AD. Left ventricular myxoma simulating aortic stenosis. 1989;117:962-3 (Brief comm.) Rossi R (see Latini et al). 1989;117:468-72 (Brief comm.) Rostagno C (see Casolo et al). 1989;117:777-82 Roubin GS (see Ellis et al). 1989;117:777-82

Rousseau G (see de Lorgeril et al). 1989;117:523-32

Rousseau G (see de Lorgeril et al). 1989;117:523-52
Roy LT (see Kiat et al). 1989;117:1-11
Rozanski JJ (see Furukawa et al). 1989;117:1050-9
Ruder MA (see Winkle et al). 1989;117:122-7
Ruskin JN (see Estes et al). 1989;117:1060-4
Ruskoaho HJ (see Ikāheimo et al). 1989;117:837-41
Russo G, Tamburino C, Cuscuná S, Arcidiacono G, Foti R, Grimaldi DR, Calvi V, Felis S, Giuffrida G. Cardiac hydatid cyst with clinical features resembling subaortic stenosis. 1989;117:1385-7 (Brief comm.)

Rutherford CR (see Mok et al). 1989;117:1171-3 (Brief comm.) Rutherford JD (see Hands and Rutherford). 1989;117:1409 (Letter

Rutishauser W (see de Bruyne et al). 1989;117:629-35

Sabiston DC (see Sheikh et al). 1989;117:623-8 Sacks H (see Bhat et al). 1989;117:799-803 Sade R (see Johnson et al). 1989;117:690-2 (Brief comm.) Safadi T (see Grenadier et al). 1989;117:479-81 (Brief comm.).
Sagie A (see Strasberg et al). 1989;117:460-3 (Curriculum cardiol.).
Sahar DI, Reiffel JA, Bigger JT Jr, Squatrito A, Kidwell GA. Efficacy, safety, and tolerance of d-sotalol in patients with refractory supraventricular tachyarrhythmias. 1989;117:562-8

Sahn DJ (see Hoit et al). 1989;117:1119-26 Saini V, Podrid PJ, Slater W, Lown B. Encainide and flecainide: Are they interchangeable? 1989;117:1253-8

Sakuma N (see Yoshino et al). 1989;117:1316-9 Salem DN (see Eichhorn et al). 1989;117:1203-9 Salerno JA (see Previtali et al). 1989;117:92-9 Sallman AL (see Ngo et al). 1989;117:385-90 Samet P (see Agatston et al). 1989;117:1320-6

Samuels L (see Camp et al). 1989;117:702-4 (Brief comm.) Saruta T. Effects of nicardipine on blood pressure and renal func-tion in elderly hypertensive patients with renal dysfunction. 1989;117:243-9 (Symposium)

Sasayama S (see Fujiki et al). 1989;117:699-701 (Brief comm.) Satoh M (see Niwano et al). 1989;117:1155-7 (Brief comm.) Satullo G (see Oreto et al). 1989;117:1403 (Letter reply)

Satullo G (see Dreto et al). 1989;117:1403 (Letter repty)
Saunders DE Jr (see Keil et al). 1989;117:1022-9
Savage M (see Wappel et al). 1989;117:37-42
Sawyer W (see Khan et al). 1989;117:1008-14
Sayah S (see Michel et al). 1989;117:56-67 (Symposium)
Schafer AI (see Mok et al). 1989;117:1171-3 (Brief comm.)
Schechter AG (see Pucillo et al). 1989;117:482-5 (Brief comm.)

Scheinman M (see Dae et al). 1989;117:861-9 Schiller NB (see Bouchard et al). 1989;117:1099-105
—— (see Pflugfelder et al). 1989;117:1113-9

Schlaepfer H (see de Bruyne et al). 1989;117:629-35 Schlepper M (see Mitrovic et al). 1989;117:106-11 Schmidt P (see Winkle et al). 1989;117:122-7 Schnur S (see Agatston et al). 1989;117:1320-6

Schofield PM (see Ramsdale and Schofield). 1989;117:685-7 (Brief

Schreiber TL, Miller DH, Zola B. Management of myocardial infarction shock: current status. 1989;117:435-43 (Curriculum cardiol.

Schröder E (see Hite et al). 1989:117:569-76 Schulman P (see White et al). 1989;117:145-50 Schultheiss H-P (see Wolff et al). 1989;117:1303-9

Schwartz DC (see Kimball et al). 1989;117:968-71 (Brief comm.) Schwartz PJ (see Facchini et al). 1989;117:1258-64 —— (see Vanoli et al). 1989;117:348-57

Sclarovsky S (see Strasberg et al). 1989;117:160-3 (Curriculum cardiol.)

Sechtem UP (see Pflugfelder et al). 1989;117:1113-9 Segal B (see Chan et al). 1989;117:1140-6 (Curriculum cardiol.) Seravalle G (see Giannattasio et al). 1989;117:740-5 (Symposium) Serruys PW (see Kamp et al). 1989;117:991-6

Sever PS. Symposium on hypertension in the elderly: focus on nicardipine—General group discussion. 1989;117:270-2 (Sym-

posium) Symposium on hypertension in the elderly: focus on nicardipine-Introduction. 1989;117:228 (Symposium)

—. Symposium on hypertension in the elderly: focus on nicar-dipine—Summary. 1989;117:273 (Symposium)
—., Poulter NR, Bulpitt CS. Double-blind crossover versus par-allel groups in hypertension. 1989;117:735-9 (Symposium)
Shafton E (see Geschwind et al). 1989;117:1147-52 (Prog. cardiol.)

Shah PK (see Mohsenifar et al). 1989;117:887-91 Shah Y (see Deligonul et al). 1989;117:509-14

Shankar B (see Murakawa et al). 1989;117:1065-9 Sharif DS, Huhta JC, Marantz P, Hawkins HK, Yoon GY. Twodimensional echocardiographic determination of ventricular

dimensional echocardiographic determination of ventricular septal defect size: correlation with autopsy. 1989;117:1333-6
Sharpe DN (see Webster and Sharpe). 1989;117:505-8 (Editorial)
Shaw L (see Camp et al). 1989;117:702-4 (Brief comm.)
Shawl FA, Chun PKC, Mutter ML, Slama RD, Donohue DJ, Zajtchuk R, Davia JE. Asymptomatic left main coronary artery disease and silent myocardial ischemia. 1989;117:537-42

Sheikh KH, Adams DB, McCann R, Lyerly HK, Sabiston DC, Kisslo J. Utility of Doppler color flow imaging for identification of femoral arterial complications of cardiac catheterization. 1989-117-623-8

—, Davidson CJ, Skelton TN, Nesmith JW, Kisslo K, Bashore TM. Interatrial septal thickening preventing percutaneous mitral valve balloon valvuloplasty. 1989;117:206-10 (Brief comm.) Shenasa M (see Dubuc et al). 1989;117:370-6

Sheps DS, Heiss G. Sudden death and silent myocardial ischemia. 1989;117:177-84 (Prog. cardiol.)

Shibata A (see Niwano et al). 1989;117:1155-7 (Brief comm.) Shibuya I (see Uchida et al). 1989;117:769-76 Shimazaki S (see Ino et al). 1989;117:1400-1 (Letter)

Shrivastava S (see Dev and Shrivastava). 1989;117:1397-8 (Letter) Sica A (see Latini et al). 1989;117:497-8 (Brief comm.)
Silberberg J, Haichin R, Stewart S, Lisbona R, Sniderman A.
Long-term stepwise sustained improvement in left ventricular ejection fraction after myocardial infarction. 1989;117:532-7

Simonetti I, Michelassi C, De Caterina R, Marzilli M, L'Abbate A. Dose- and time-related vasodilator response of conduit coronary arteries to intracoronary isosorbide dinitrate in human beings. 1989:117:323-31

Simpfendorfer C (see Tuzcu et al), 1989;117:1374-7 (Prog. cardi-

Sioufi A (see Kaiser et al). 1989;117:746-51 (Symposium) Skelton TN (see Davidson et al). 1989;117:411-7 (see Sheikh et al). 1989;117:206-10 (Brief comm.)

Slama RD (see Shawl et al). 1989;117:537-42 Slater W (see Saini et al). 1989;117:1253-8 —— (see Tunick et al). 1989;117:1161-5 (Brief comm.)

Smialek JE (see Robinowitz et al). 1989;117:1398-9 (Letter reply)

Smith FE (see Rezkalla et al). 1989;117:391-5 Smith MD, Metcalfe M, DeMaria AN, Hendren WG, Walter PF. Jones EL. Hypereosinophilic syndrome resulting in aortic and mitral stenosis: a case requiring double valve replacement. 1989;117:475-9 (Brief comm.)

Smith V-E (see White et al), 1989:117:145-50 Sniderman A (see Silberberg et al). 1989;117:532-7 Sobel BE (see Devries et al). 1989;117:31-6 Songa V (see Facchini et al). 1989;117:1258-64

Sonoki H (see Tomaru et al). 1989;117:275-81 Sperduto RD (see Podgor et al). 1989;117:642-8 S.P.I. Research Group (see Knight et al). 1989;117:1189-95 Spodick DH. ECG diagnosis of MI in LBBB. 1989;117:1409

Squatrito A (see Sahar et al). 1989;117:562-8 Squarrito A (see Sanar et al). 1989;117:1092-8
Starling RC (see Leier et al). 1989;117:1092-8
Sterkman LGW (see Verheugt et al). 1989;117:1018-22
Stevenson LW (see Bergman et al). 1989;117:204-6 (Brief comm.)
Stevenson WG, Weiss JN, Wiener I, Nademanee K. Slow conduction in the infact scar: relevance to the occurrence, detection,

and ablation of ventricular reentry circuits resulting from my-ocardial infarction. 1989;117:452-67 (Prog. cardiol.) — (see Bergman et al). 1989;117:204-6 (Brief comm.)

—— (see Denardo and Stevenson). 1989;117:585-9
Stewart JM, Kaul A, Gromisch DS, Reyes E, Woolf PK, Gowitz
MH. Symptomatic cardiac dysfunction in children with human

immunodeficiency virus infection. 1989;117:140-4 Stewart S (see Silberberg et al). 1989;117:532-7

Stewart WJ (see Ascah et al). 1989;117:402-11 Stoddard MF, Chaitman BR, Byers SL, Mrosek D, Labovitz AJ.

Noninvasive assessment of diastolic and systolic properties of ibopamine in patients with congestive heart failure. 1989:117:395-402

—, Pearson AC, Kanter KR, Labovitz AJ. Left ventricular thrombus with normal left ventricular wall motion in a patient with myelofibrosis. 1989;117:966-8 (Brief comm.)

With injections is 18,11730 (1889;117:809-18 (1899;117:809-18 (1899;117:86-92 (1899;117:86-92 (1899;117:86-94 (1899;117:86-94 (1899;117:348-95) (1899;117:348-57 (1899;117:348-5

Stransky NB (see Eichhorn et al). 1989;117:1203-9 Stransberg B, Sagie A, Rechavia E, Sclarovsky S, Agmon J. The noninvasive evaluation of syncope of suspected cardiovascular

origin. 1989;117:160-3 (Curriculum cardiol.) Stratmann HG, Kennedy HL. Evaluation of coronary artery disease in the patient unable to exercise: alternatives to exercise

ease in the patient unable to exercise: alternatives to exercise stress testing, 1989;117:1344-65 (Curriculum cardiol.) Straub KD (see Peng et al). 1989;117:515-22 Strohsnitter W (see Goldberg et al). 1989;117:543-9 Stroobandt R (see Rogiers et al). 1989;117:1278-83 Sugimoto T (see Tomaru et al). 1989;117:275-81 Suliman RF (see El Habbal and Suliman). 1989;117:1127-32 Sullivan JL. The iron paradigm of ischemic heart disease. 1989;117:1177-88 (Editorial)

Suryapranata H (see Kamp et al). 1989;117:991-6 Svanegaard J, Angelo-Nielsen K, Pindborg T. Atrial natriuretic peptide and acute myocardial infarction. 1989;117:194-5 (Brief

Takashiba K (see Matsuda et al). 1989;117:1014-7 Takeda F (see Matsui et al). 1989;117:472-4 (Brief comm.) Takekoshi N (see Matsui et al). 1989;117:472-4 (Brief comm.) Takeuchi E (see Tanaka et al). 1989;117:692-5 (Brief comm.) Takezawa H (see Yamakado et al). 1989;117:1379-81 (Brief comm.) Takkunen JT (see Ikäheimo et al). 1989;117:837-41 Tamburino C (see Russo et al). 1989;117:1335-7 (Brief comm.) Tan ACITL, van Loenhout TT, Lamfers EJP, Kloppenborg PWC, Benraad ThJ. ANP in AMI. 1989;117:1406-7 (Letter) Tanaka K (see Unoki et al). 1989;117:1159-61 (Brief comm.)
Tanaka M, Takeuchi E, Abe T. Detection of aortic valve ring abscess by intraoperative epicardial two-dimensional echocardio-graphy. 1989;117:692-5 (Brief comm.)

graphy. 1989;117:592-5 (Brief comm.)
Tarasoutchi F (see Arie et al). 1989;117:201-2 (Brief comm.)
Tedesco C (see Reed et al). 1989;117:60-71
Thakor NV (see Murakawa et al). 1989;117:1065-9
Thomas JD (see Choong et al). 1989;117:636-42
Thompson CJ (see Narahara et al). 1989;117:1030-5
Thormann J (see Mitrovic et al). 1989;117:106-11

Tollisch JH (see Bergman et al.). 1989;117:104-6 (Brief comm.)
Tofler GH, Muller JE, Stone PH, Willich SN, Davis VG, Poole
WK, Robertson T, Braunwald E, MILIS Study Group. Pericarditis in acute myocardial infarction: characterization and clinical significance. 1989;117:86-92

Toltzis HI (see Eichhorn et al). 1989;117:1203-9
Tomaru T, Uchida Y, Nakamura F, Sonoki H, Tsukamoto M,
Sugimoto T. Enhancement of arterial thrombolysis with native tissue type plasminogen activator by pretreatment with heparin or batroxobin: an angioscopic study. 1989;117:275-81 Tomoike H (see Mohri et al). 1989;117:43-52

Topaz O (see Kessler et al). 1989;117:964-6 (Brief comm.) Topic N (see Bouchard et al). 1989;117:1099-1105 Torrecilla EG, Pérez MR, Alvarez L, Balaguer J, Martinell J,

Rábago G. Rare attachment of left atrial myxoma: two-dimen sional echocardiographic evidence. 1989;117:1389-90 (Brief comm.)

Toutouzas PK (see Michaelides et al). 1989;117:1035-41 Triposkiadis FK (see Michaelides et al). 1989;117:1035-41 Triulzi MO (see Ascah et al). 1989;117:402-11

Trotta F (see Casolo et al). 1989;117:468-72 (Brief comm.)
Tsai R-C (see Hung et al). 1989;117:488-75
Tseng Y-Z (see Lo et al). 1989;117:959-62 (Brief comm.)
Tsukamoto M (see Tomaru et al). 1989;117:275-81
Tsutamoto T, Bito K, Kinoshita M. Plasma atrial natriuretic polypeptide as an index of left ventricular end-diastolic pressure in patients with chronic left-sided heart failure. 1989;117:599-

Tunick PA, Slater W, Kronzon I. The hemodynamics of left ventricular pseudoaneurysm: color Doppler echocardiographic study. 1989;117:1161-5 (Brief comm.)
 Tuominen MO (see Ikäheimo et al). 1989;117:837-41
 Tuzcu EM, Simpfendorfer C, Dorosti K, Franco I, Hollman J, Badhwar K, Whitlow P. Changing patterns in percutaneous transluminal coronary angioplasty. 1989;117:1374-7 (Prog. cardiol)

Uchida Y. Percutaneous coronary angioscopy by means of a fiber-scope with a steerable guide wire. 1989;117:1153-5 (Brief comm.)
——, Hasegawa K, Kawamura K, Shibuya I. Angioscopic observation of the coronary luminal changes induced by percutaneous transluminal coronary angioplasty. 1989;117:769-76
—— (see Tomaru et al). 1989;117:275-81
Uematsu M (see Masuyama et al). 1989;117:133-9
Ueyama M (see Bogren et al). 1989;117:1214-22
Unoki T, Nakagawa S, Koiwaya Y, Tanaka K. Extraluminal contrast pooling on coronary angiography as an expression of rup-

trast pooling on coronary angiography as an expression of rup-tured atheromatous plaque. 1989;117:1159-61 (Brief comm.) — (see Yoshino et al). 1989;117:1316-9

van den Brand M (see Kamp et al). 1989;117:991-6 Vandormael MG (see Deligonul et al). 1989;117:509-14 Vandormael MG (see Deligonul et al). 1989;117:509-14

— (see Deligonul et al). 1989;117:907-1002

— (see Labovitz et al). 1989;117:1003-8

van Gilst WH (see van Wijk et al). 1989;117:365-9

van Loenhout TT (see Tan et al). 1989;117:1406-7 (Letter)

Vannelli A, Fuller HD. An unusual artifactual cause of apparent atrial flutter. 1989;117:202-4 (Brief comm.)

Vanoli E, De Ferrari GM, Stramba-Badiale M, Farber JP, Schwartz

PJ Corkon monovide and lettel ersbythyrics in congrigue deeps

PJ. Carbon monoxide and lethal arrhythmias in conscious dogs with a healed myocardial infarction. 1989;117:348-57 van Ommen V (see Cheriex et al). 1989;117:1394-6 (Brief comm.) Van Train K (see Kiat et al). 1989;117:1-11 Van Vleet JF (see Radovsky and Van Vleet). 1989;117:1288-98 van Wijk LM, Crijns HJ, van Gilst WH, Wesseling H, Lie KI. Flecainide acetate in the treatment of supraventricular tachycardias: value of programmed electrical stimulation for long-term prognosis. 1989;117:365-9 Varisco T (see Facchini et al). 1989;117:1258-64 Vasquez J (see Jamison et al). 1989;117:607-14

Vergara G (see Guarnerio et al). 1989;117:1241-52 Verheugt FWA, Küpper AJF, Sterkman LGW, Meijer A, Peels CH, Roos JP. Emergency room infusion of intravenous strep-tokinase in acute myocardial infarction: feasibility, safety, and

hemodynamic consequences. 1989;117:1018-22 Vermeir W (see Rogiers et al). 1989;117:1278-83

Versely DL (see Ngoets et al). 1969;117:1276-65 Vessely DL (see Ngo et al). 1989;117:385-90 Vetrovec GW (see Alpert et al). 1989;117:185-6 (Brief comm.) Virmani R (see Latham et al). 1989;117:386-82 — (see Robinowitz et al). 1989;117:1398-9 (Letter reply) Viskin S, Belhassen B. Spontaneous reversion of VF. 1989;117:1401

(Letter)
Vlay SC. Defibrillation threshold testing: Necessary but evil?

1989;117:499-504 (Editorial)
—, Chernilas J, Lawson WE, Dervan JP. Restenosis after angio-

—, Chernilas J, Lawson WE, Dervan JP. Restenosis after angio-plasty: don't rely on the exercise test. 1989;117:980-6 (Editorial) — (see Dervan and Vlay). 1989;117:1411-4 (Editorial) Volz M (see Mitrovic et al). 1989;117:1411-4 (Editorial) Von Dohlen TW (see Gross et al). 1989;117:953-7 (Brief comm.) Vran F (see Carretta et al). 1989;117:229-35 (Symposium) Vyssoulis GP (see Michaelides et al). 1989;117:1035-41

Waeber B (see Nussberger et al). 1989;117:717-22 (Symposium) Wagner GS, Hackel DB. QRS scoring and anterior and inferior MI

Wagner GS, Hackel DB. QRS scoring and anterior and interior MI size. 1989;117:1405-6 (Letter)
Waller BF (see Barry et al). 1989;117:332-41
— (see Bourdillon et al). 1989;117:492-5 (Brief comm.)
Walter PF (see Smith et al). 1989;117:475-9 (Brief comm.)
Wappel M, Zalewski A, Savage M, Hessen S, Goldberg S, Maroko PR. Myocardial salvage after regional beta-adrenergic blockade.

1989;117:37-42 Warltier DC (see Al-Wathiqui et al). 1989;117:791-8

Watson DD (see Reed et al). 1989;117:60-71
Watts LE (see Downes et al). 1989;117:106-12
Webb JG, Aldridge HE, Fulop J, Haq A. Aortocoronary saphenous vein graft spasm inducing ventricular fibrillation.
1989;117:485-6 (Brief comm.)

Weber L (see Jamison et al). 1989;117:607-14
Webster MWI, Sharpe DN. Exercise testing in angina pectoris: the importance of protocol design in clinical trials. 1989;117:505-8

Weinrich MC (see Keil et al). 1989;117:1022-9

Weiss JN (see Stevenson et al). 1989;117:452-67 (Prog. cardiol.) Weiss JN (see Stevenson et al). 1989;117:452-b7 (Prog. cardiol.)
Wellens HJJ (see Cheriex et al). 1989;117:1394-6 (Brief comm.)
—— (see de Zwaan et al). 1989;117:657-65 (Curriculum cardiol.)
Wen Y-m (see Dae et al). 1989;117:861-9
Werner CA (see Hustead et al). 1989;117:1383-5 (Brief comm.)
Wesseling H (see van Wijk et al). 1989;117:365-9
Wexman M (see Geschwind et al). 1989;117:1147-52 (Prog. cardi-

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— (see Choong et al). 1989;117:636-42
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White WB, Schulman P, Karimeddini MF, Smith V-E. Regression

of left ventricular mass is accompanied by improvement in rapid left ventricular filling following antihypertensive therapy with metoprolol. 1989;117:145-50

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- Yamakado T, Kecheng X, Masuda T, Nakano T, Takezawa H. Disappearance of coronary collateral vessels as a mechanism of vasospastic angina. 1989;117:1379-81 (Brief comm.)
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